Amendments to the Claims

This Listing of Claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An inert anode assembly comprising:

an inert anode having a cavity;

an electrically conductive rod at least partially disposed in the cavity defining a gap between the inert anode and the conductive rod; and

particulate conductor material at least partially filling the gap, wherein the particulate conductor material comprises at least one metal selected from Cu, Ag and Ni.

2. (Cancelled)

3. (Original) The inert anode assembly of claim 1, wherein the particulate conductor material has an average particle size of from about 0.05 to about 5 mm.

4. (Original) The inert anode assembly of claim 1, wherein the particulate conductor material has a monomodal particle size distribution.

5. (Original) The inert anode assembly of claim 1, wherein the particulate conductor material comprises multiple particle size distributions.

6. (Original) The inert anode assembly of claim 1, wherein the particulate conductor material has a bimodal size distribution.

7. (Original) The inert anode assembly of claim 1, wherein the particulate conductor material has a trimodal size distribution.

8. (Original) The inert anode assembly of claim 1, wherein the particulate conductor material has a density of less than 95 percent of a theoretical density of the conductor material.

9. (Original) The inert anode assembly of claim 1, wherein the particulate conductor material has a density of from about 60 to about 90 percent of a theoretical density of the conductor material.

10. (Currently Amended) The inert anode assembly of claim 1, wherein the particulate ~~connector~~ conductor material is at least partially sintered.

11. (Original) The inert anode assembly of claim 1, wherein the gap is from about 0.1 to 15 cm.

12. (Original) The inert anode assembly of claim 1, wherein the gap is from about 0.5 to about 5 times a diameter of the conductive rod.

13. (Currently Amended) The inert anode assembly of claim 1, further comprising at least one conductive coating between the inert anode and the particulate ~~connector~~ conductor material and/or between the conductive rod and the particulate ~~connector~~ conductor material.

14. (Original) The inert anode assembly of claim 13, wherein the at least one conductive coating comprises at least one metal selected from Cu, Ag, Sn and Ni.

15. (Original) The inert anode assembly of claim 13, wherein the at least one conductive coating has a thickness of from about 0.01 to about 1 mm.

16. (Original) The inert anode assembly of claim 1, wherein the inert anode comprises a ceramic.

17. (Original) The inert anode assembly of claim 1, wherein the inert anode is substantially cylindrical and cup shaped.

18. (Original) The inert anode assembly of claim 1, wherein the inert anode has an outer diameter of from about 3 to about 30 cm, and a height of from about 10 to about 40 cm.

19. (Original) The inert anode assembly of claim 1, wherein the conductive rod comprises at least one metal selected from Ni, Cu and Fe.

20. (Original) The inert anode assembly of claim 1, wherein the conductive rod has an outer diameter of from about 10 to about 100 mm.

21. (Currently Amended) The inert anode assembly of claim 1, further comprising a seal between the conductive rod and the inert anode above the particulate ~~connector~~ conductor material.

22. (Original) The inert anode assembly of claim 21, wherein the seal comprises a castable ceramic material.

23. (Currently Amended) A method of making an inert anode assembly comprising:

providing an inert anode comprising a cavity;

providing an electrically conductive rod at least partially in the cavity with a gap between the inert anode and the conductive rod; and

providing a particulate connector material in the gap, wherein the particulate connector material is poured into the gap in loose particulate form.

24. (Cancelled)

25. (Original) The method of claim 24, wherein the particulate connector material has a density of from about 50 to about 95 percent of a theoretical density of the connector material.

26. (Original) The method of claim 23, further comprising sintering the particulate connector material.

27. (Original) The method of claim 26, wherein the particulate connector material is sintered during use of the inert anode assembly in an electrolytic aluminum production cell.

28. (Original) The method of claim 26, wherein the particulate connector material is sintered prior to use of the inert anode assembly in an electrolytic aluminum production cell.

29. (Original) The method of claim 26, wherein the sintering is performed at a temperature of from about 600 to about 1,200.degree. C.

30. (Currently Amended) The method of claim 23, wherein the particulate ~~conductor~~ connector material comprises at least one metal selected from Cu, Ag and Ni.

31. (Currently Amended) The method of claim 23, wherein the particulate ~~conductor~~ connector material has an average particle size of from about 0.05 to about 5 mm.

32. (Currently Amended) The method of claim 23, wherein the particulate ~~conductor~~ connector material has a monomodal particle size distribution.

33. (Currently Amended) The method of claim 23, wherein the particulate ~~conductor~~ connector material comprises multiple particle size distributions.

34. (Original) The method of claim 23, wherein the gap is from about 0.1 to about 15 cm.

35. (Original) The method of claim 23, further comprising providing a conductive coating between the inert anode and the particulate connector material and/or between the conductive rod and the particulate connector material.

36. (Original) The method of claim 23, wherein the inert anode comprises a ceramic and the conductive rod comprises a metal.

37. (Original) The method of claim 23, further comprising providing a seal between the conductive rod and the inert anode above the particulate connector material.

38. (Original) A method of producing aluminum comprising:

passing current between an inert anode assembly and a cathode through a molten salt bath comprising an electrolyte and aluminum oxide; and

recovering aluminum from the molten salt bath, wherein the inert anode assembly comprises:

an inert anode having a cavity;

an electrically conductive rod at least partially disposed in the cavity defining a gap between the inert anode and the conductive rod; and

particulate conductor material at least partially filling the gap.

39. (Original) The method of claim 38, wherein the particulate conductor material has a density of from about 50 to about 95 percent of a theoretical density of the conductor material.

40. (Currently Amended) The method of claim 38, further comprising sintering the particulate ~~connector~~ conductor material during the inert anode production process.

41. (New) The inert anode assembly of Claim 1, wherein said particulate conductor material comprises at least one of Fe, Al, bronze, MONEL, and INCONEL.

42. (New) The inert anode assembly of Claim 1, wherein said particulate conductor material has a density of less than 90 percent of a theoretical density of the conductor material.